

## ABSTRACT

A contact system for electrically engaging semiconductor components includes an interface board mountable to an automated test handler, and a floating substrate on the interface board. The interface board includes interface contacts in electrical communication with external test circuitry. The substrate includes flexible segments, and contactors having contact pads on opposing sides of the flexible segments configured to simultaneously electrically engage terminal contacts on the components, and the interface contacts on the interface board. The contact pads include conductive polymer layers that provide an increased compliancy for the contactors. This increased compliancy allows the contactors to accommodate variations in the dimensions and planarity of the terminal contacts on the component. In addition, the substrate includes grooves between the contactors which provide electrical isolation and allow the contactors to move independently of one another. An alternate embodiment contact system includes a Z-axis conductive polymer layer between the substrate and the interface board. Also provided are test methods employing the contact systems.